

## REMARKS

### I. Summary

In the Office Action, the Examiner allowed claims 1-19 and the specification was objected to because of informalities. In response, the Applicant thanks the Examiner for the allowance and submits the following remarks. Further, the Applicant has amended the specification to correct a typographical error. The amendments to the specification do not add any new matter and are fully supported by the originally filed specification.

### II. Objections to the Specification

In the Office Action, the Examiner objected to the specification. Specifically, according to the Examiner, it is unclear as to how the combiner combines the received signals with and without diversity from both the Node-Bs in FIG. 5, assuming there are two Nodes, Node-B1 and Node-B2, each Node-B having the method of transmitting diversity and without diversity, respectively, and each of the first Node-B and second Node-B are having the same configuration as shown in the example of FIG. 5.

In response, the Applicant notes that the specification describes that, when each of the Node-Bs uses the transmit diversity method for transmitting the signals through two antennas, individual demodulation operations for antenna diversity are to be performed by taking into account the two antennas per fingers. *See page 16, lines 3-10.* Further, with respect to FIG. 5, the specification discloses a plurality of fingers are assigned to each Node-B take into account the **channel environments** associated with the first antennas 502 and 506, and the second antennas 504 and 508. *See page 19, lines 3-25.* The transmit diversity controller 530 controls the combiner 520 to determine whether the second antennas associated with the fingers are to be combined. The transmit diversity controller receives transmit diversity information from the Node-Bs and controls the combiner 520 and the transmit diversity signal processor 540 on the basis of received information and decides a transmit demodulation method. *See page 19, lines 23-25; and page 16, line 22 – page 17, line 23.* In the example of FIG. 5, the switches 510 and/or 512 of the second antennas 504 and 508 associated with the fingers are turned on in relation to the Node-B using the transmit diversity method, and switches 510 and/or 512 of the second antenna 504 or 508 associated with the fingers are turned off in relation to the Node-B without using the transmit diversity

method. Accordingly, the signals of the first antennas 502 and 506 are combined by the combiner 520 irrespective of a transmit diversity method, and the signals of the second antennas 504 and 508 are combined according to the transmit diversity method.

Further, the Office Action requests clarification as to, if the first Node-B is about to combine as disclosed in page 19 and with respect to FIG. 5 and the second Node-B is transmitting without diversity mode, how the diversity combiner combines all the signals from the Node-B with diversity and the signals from Node-B without diversity.

The Applicant submits that the first Node-B, as indicated by the Examiner, does not combine with respect to FIG. 5. Rather, the **signals of the antennas** are combined according to transmit diversity information received from the Node-Bs. The specification discloses that a control operation is performed so that the antenna signals can be combined in relation to fingers assigned for the Node-B. *See page 16, lines 19-29.* With respect to FIG. 5, a plurality of fingers is assigned to each Node-B. The antenna signals are combined in relation to the fingers assigned for each Node-B. The combining operation for the signals of the first antennas 502 and 506 are combined irrespective of a transmit diversity method, and the signals of the second antennas 504 and 508 are combined according to the transmit diversity method. The signals of the second antennas 504 and 508 are selected by the switches 510 and 512 and are coupled to the second antennas 504 and 508 according to the control of the transmit diversity controller 530 receiving the transmit diversity information.

Further, the Office Action requests clarification as to, if the Node-B with diversity method combines all the signals received and combines only signals of the first antennas, how FIG. 5 combines the signals of the first antennas from Node-B and all the signals from the antennas of the first Node-B.

The Applicant submits that the specification discloses that the transmit diversity controller controls the combiner to combine the signals associated with the fingers based on transmit diversity information from the Node-Bs. *See page 16, lines 22-29.* The transmit diversity controller collects the transmit diversity information associated with all Node-Bs within an active set, and decides a transmit diversity demodulation method for the signals. With respect to FIG. 5, the signals of the first antennas 502 and 506 are combined by a

combiner 520 irrespective of a transmit diversity method, and the signals of the second antennas 504 and 508 are combined according to the transmit diversity method. *See page 19, lines 6-8.* Where a predetermined Node-B does not use the transmit diversity method in terms of fingers assigned to the Node-B, the signals of the second antennas 504 and 508 do not join the combining operation of the combiner 520. The signals of the second antennas 504 and 508 are selected by the switches 510 and 512 and are coupled to the second antennas 504 and 508 according to the control of the transmit diversity controller 530 receiving the transmit diversity information. *See page 19, lines 9-22.*

### **III. Conclusion**

The Applicant submits that the above amendments and arguments are fully responsive to the Ex Parte Quayle Action dated April 13, 2008, and respectfully request the asserted grounds of objections be withdrawn based on the foregoing. The Applicant submits that the claims are in condition for allowance and notice to that effect is respectfully requested. Should the Examiner have any questions, the Examiner is encouraged to contact the undersigned at the telephone number indicated below.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Simon Booth', written over a horizontal line.

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